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NEWS ISSUE — JULY 15, 1948

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# News of the Week

ENGINEERING NEWS-RECORD • JULY 15, 1948 • VOLUME 141 • NUMBER 3

## Cement prices start to rise as base-points are dropped

***Steel companies suddenly abandon basing-point price system also—See major effect on construction costs as freight charges are added to mill prices***

The construction industry last week began to feel the effect of abandonment of the basing-point system of pricing bulk building items, as cement prices began a general rise. Major steel producers, in a surprise move, joined the trend by abandoning their own basing-price system, and reverting to an f.o.b. mill basis.

A spot-check by *Engineering News-Record* showed cement prices at the mills of five major producers had risen from five to 25 cents, and that three others had not yet announced any change. The delivered price for bulk cement in New York city was reportedly up to $2.96 per barrel last week, as compared to the former price of $2.82.

The abandonment of basing-point pricing by the steel companies came so suddenly that, by the end of the week, most steel mills were not prepared to say what changes might be made. Expert opinion, however, seemed agreed that steel prices to the consumer would rise, since the companies would no longer absorb the differential in freight rates.

Both the steel and cement price policy changes were directly traceable to a decision of the U. S. Supreme Court nearly two months ago (*ENR* May 6, vol.p.671) when the court upheld the Federal Trade Commission in a cease-and-desist order it had issued ordering cement producers to end the multiple basing point system. The FTC followed up this decision early in June (*ENR* June 17, vol.p.983) with a similar order to manufacturers of brick and clay tile.

**Steel surprises observers**

The change in the attitude on steel pricing came as a surprise to most observers, who had expected the industry to delay any change until it had learned the outcome of an FTC case against the pricing system.

However, on July 8, the United States Steel Corp. announced it was abandoning the basing price system—under which, like the cement companies it was absorbing most of the freight differential to customers at some distance from its plants.

Other large producers began to fall hastily into line, and on July 9 Bethlehem Steel, Wheeling Steel Corp. and several others had announced they also would abandon the previous pricing method. The Shenango Furnace Co. of Pittsburgh, Pa., announced a $4 per ton raise in the price of pig iron.

The changeover gave rise to immediate predictions of possible decentralization of the steel industry in order to reduce the increased prices due to freight charges, and to expressed fears that the automobile and other industries which are heavy steel users will be adversely affected.

No responsible construction-industry leader made immediate comment, but it

(*Continued on page* 3)

## See building setback in coal strike

Construction will suffer some setback as a result of the strike that started July 6 in the "captive" coal mines of the steel companies. Until the United Mine Workers make their response to an injunction to halt the strike, the possible effects cannot be estimated with any accuracy.

At the end of last week, 52,000 miners were on strike at the steel producers' pits. Sympathy strikers to the number of 25,000 were reported staying away from commercial mines. These two groups together represented nearly 20 percent of the 400,000 United Mine Workers in the soft coal fields.

U. S. Steel subsidiaries and most of the independents get the great bulk of their coal from "captive" mines. Only a small percentage comes from commercial pits. Steel spokesmen said last week there was no possibility of getting more tonnage from the commercial operators.

Effects of last spring's soft coal strike (March 15-April 12) showed up in April production and shipments of iron and steel products for construction. Those records give a rough basis for judging the effect of the July 6 strike on the same items.

This time, the effect may come more quickly. In March, steel ingot production dropped 1.8 points during the first week of the strike, from 97.5 to 95.7 percent of capacity. By the fourth and final week, it was down to 71.3 percent. During that strike, the steel companies maintained production levels as high as they safely could, banking on a reasonably quick settlement. In general, they had coal stocks for 26 to 30 days when the strike began.

Coal stocks at the coking plants on July 6 probably were as high as on March 15, although the steel companies were reluctant to say just how much was on hand. Complexities of the captive mine situation, however, apparently made the steel producers less willing to gamble on an early settlement. Many furnaces shut down the first day.

Department of Commerce figures released last week showed that the 28-day March-April strike cut shipments of six important items in April, as compared with March, by these amounts: fabricated structural steel, down 17,688 tons, or 10.6 percent; concrete reinforcing bars, down 16,298 tons, or 11.8 percent; wire nails, down 5,125 tons, or 6.5 percent; cast-iron pressure pipe and fittings, down 10,034 tons, or 10 percent; cast-iron soil pipe and fittings, down 3,495 tons, or 6.6 percent; cast-iron radiation; down 691,000 sq. ft., or 12.6 percent.

May figures were available last week for only a few items. Shipments of fabricated structural steel bounded upward to 168,500 tons. Cast-iron radiation shipments showed a gain of 329,000 sq. ft. over April, but still 362,000 sq. ft. short of the March figure of 5,485,000.

## NEWS IN BRIEF

*In telegraphic form, here are latest news developments on the engineering and construction front during the week.*

**Highways**—A holder of four *Arkansas* highway bonds started suit in federal court at *Little Rock*, Ark., seeking to enjoin the state treasurer and auditor from continuing alleged illegal diversion of highway revenues to pay general state expenses. According to the suit, certain municipal improvement districts are illegally permitted to share in a $750,000 annual allotment of highway funds. . . . The *North Carolina* highway commission has allocated $42,061,000 for use in the state's ten highway divisions during the new fiscal year . . . It will cost about $7,500,000 to repair flood damage on main federal-aid roads in *Washington, Oregon, Montana* and *Idaho*, according to preliminary estimates of the Public Roads Administration. . . . The *Ohio* highway department expects to spend a record-breaking $50,000,000 for highway construction during 1948, as compared to $39,000,000 in 1947. . . . The city of *Buffalo*, N. Y., has been urged to provide $2,000,000 for immediate use on a two-year street paving program.

**Housing**—An eight story, 81-apartment building will be built at *Memphis*, Tenn., by the Bilao Realty Company. . . . Commissioners of Mahoning County (Youngstown) Ohio, ended a year's bitter fight by approving annexation by the city of *Campbell* of 30 acres to the east. City officials wanted to annex the territory to permit a construction company to go ahead with a home building program and had temporarily provided sewer and water lines to the new development. Adjoining township officials had opposed the annexation on the ground that they would lose tax revenues. . . . A $4,000,000 project, known as "Northacres," is now under construction just outside of *White Plains*, N. Y., by Sam Minskoff & Sons. The project will consist of 100 residences, selling for between $35,000 and $50,000.

**Labor**—Under an agreement just signed with the Mason Contractors Association in *St. Louis*, AFL bricklayers will receive a 24 cent per hour increase to a rate of $2.75 per hour. . . . Three union labor leaders of *Paducah*, Ky., were indicted by the Marshall County grand jury on charges of intimidation. The indictment said that the union leaders "abused, struck, beat, cursed and threatened" the superintendent of construction on a job and threatened further beatings if the superintendent failed to obey their orders. . . . Bricklayers at *Louisville*, Ky., are now being paid $100 for a 40-hour work week. . . . Officials of the Building Trades Council of *Billings*, Montana, joined with contractors and the city's Commercial Club in an attempt to relieve a critical cement shortage which is causing substantial layoffs of construction workers in the area. . . . *Dallas*, Tex., building trade unions and employers settled six new contracts for $1 to $2 a day higher wages.

**Industrial Construction**—The Pacific Gas & Electric Company plans construction of a new $4,500,000 gas holder in the Potrero district of *San Francisco*. . . . The Public Service Company of *Indiana* will begin construction of a $2,500,000 power station and substation at *Riverwood*, near the city of *Noblesville*.

**Miscellany**—The Tennessee Valley Authority used 840,000 lb. of explosives to blow up a rock hill to provide stone for dam construction on the *South Holston Dam*. . . . A world-famed monorail shortline, connecting the halls of Congress with the Senate Office Building, will be doubled in length. The track will now link the new Senate office building into the system. . . . The Canadian government will build an airport at *Fredericton*, N. B.

## Construction to begin on Turnpike extension

Construction of the eastern extension of the Pennsylvania Turnpike is scheduled to start in September, according to Gov. James H. Duff. Funds are available for starting the 100-mile project.

Under present plans, the Susquehanna River bridge between Marsh Run and Highspire will be one of the first jobs undertaken in the hope of completing its pier foundations before winter.

### THE COVER PICTURE

**Borings yielding soil and rock samples from depths to 325-ft. below the San Francisco Bay floor are being made on two possible sites for the proposed second bridge across the bay.**

**Tests on the samples taken are made by the laboratory of the California Department of Public Works.**


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# Ban on basing-point affects building

(*Continued from first page*)

seemed obvious that construction steel products would rise in price.

**Cement rises**

The cement companies apparently were completing their preparations for the changeover as the week ended.

The *ENR* check on July 9 showed these results:

Pennsylvania-Dixie Cement Co.—Price increases ranging from five to 15 cents per barrel, fob. the company's six mills, with a top new price of $2.30 per barrel; Universal Atlas Cement Co.—increases ranging from no change to 15 cents per bbl. at 10 mills, with a top of $2.30 per bbl.; Lone Star Cement—increases ranging from no change to 20 cents at 10 mills, with a top of $2.45 per bbl.; Huron Portland Cement Co.—increases ranging from 10 to 25 cents at 11 mills, with a top of $2.40 per bbl. The Alpha Portland Cement Co.; Lehigh Portland Cement Co.; Marquette Cement Co.; and mills on the Pacific Coast reported no immediate changes, but officials indicated that changes may be put into effect shortly.

**Current prices**

In detail, the survey showed: (current mill prices in parentheses):

*No changes at mills at*: Clinchfield, Ga. ($2.25); Kingsport, Tenn. ($2.25); Independence, Kan. ($2.20); Hannibal, Mo. ($2.20); Universal, Pa. ($2.20); Waco, Texas, ($1.95); Steelton, Minn. ($2.30); Leeds, Ala. ($2.10); Duluth, Minn. ($2.30); North Birmingham, Ala. ($2.10); Hudson, N. Y. ($2.25).

*Five-cent increases at*: Richard City, Tenn. ($2.25); Spocari, Ala. ($2.20).

*Ten-cent increases at*: West Des Moines, Iowa ($2.30); Buffington, Ind. ($2.20); Limedale, Ind. ($2.20); Bonners Springs, Kan. ($2.30); Nazareth, Pa. ($2.25); Alpena, Mich. ($2.20); Oswego, N. Y. ($2.40).

*Fifteen-cent increases at*: Bath, Pa. (2.30); North Hampton, Pa. ($2.30); Detroit, Mich. ($2.35); Wyandotte, Mich. ($2.25); Buffalo, N. Y. ($2.35); Cleveland, Ohio ($2.35); Milwaukee, Wis. ($2.35).

*Twenty-cent increases at*: Harrys, Texas ($2.15); South Norfolk, Va. ($2.45); Toledo, Ohio ($2.35).

*Twenty-five cent increase at*: Muskegon and Saginaw, Mich. ($2.35).

**Marquette to hold to past policy**

The Marquette company advised its customers, that nothing in the recent Supreme Court decision requires Marquette to change its sales policy.

Marquette will continue its policy of quoting prices at destinations within reasonable shipping distance from any of its several manufacturing or shipping plants.

"It has been Marquette's practice to meet any lower price of a competitor, whenever it has been considered consistent with good business practice," the company said.

"Marquette will continue this policy.

"The Opinion of the Supreme Court in the 'Cement Case' sustains an Order of the Federal Trade Commission, which, as the Court says in its Opinion, is directed solely at concerted, not individual activity on the part of the respondents.

"Marquette Cement Manufacturing Company never has used and does not intend ever to use, or have any part in, any method of pricing which involves combination or agreement, whether it be referred to as a 'basing-point system of pricing' or by any other name. Independence, not combination or agreement, has always marked Marquette's pricing and marketing policy. This policy will be maintained."

## Assistant engineer chief becomes brigadier general

Promotion of Col. P. A. Feringa, assistant chief of engineers for civil works, to the rank of brigadier general, was announced last week.

Gen. Feringa

In a ceremony attended by fellow officers, Lieut. General R. A. Wheeler, chief of engineers, pinned the star of his new rank on General Feringa. The promotion was made under provisions of an act passed by the recent Congress which provides that the officer of the Corps of Engineers assigned to duty as assistant chief of engineers for civil works shall, while assigned to such duty, have the rank of brigadier general.

General Feringa has been assistant chief of engineers for civil works since April, 1946, exercising supervisory control over the complete program of federal flood control and river and harbor projects assigned to the Corps.

# Construction-in-place tops record

Construction work put in place during June set a new peak in dollar volume —$1,605,000,000 for the month—the Bureau of Labor Statistics announced last week. This is the highest monthly figure since the Bureau began reporting monthly data in 1939.

The Bureau's monthly construction estimates necessarily are projections based on contract awards and other data previously collected. They are probably the best gages available of month-by-month dollar volume and employment on construction. Reduced to physical volume, the June construction total would not loom so large; in 1939 prices, it would amount to much less than $1,000,000,000.

Construction employment in June increased by 133,000 to a total of 2,182,000—the largest since November 1942, and 225,000 above June, 1947.

Private construction accounted for $1,218,000,000, or 76 percent, of the work done in June. Slightly more than half of the private building expenditures went into new non-farm housing, which took $625,000,000, an increase of $50,000,000 over May and $220,000,000 over June a year ago.

Commercial building increased in June to $117,000,000, an 18 percent jump above the $99,000,000 for May. According to the bureau, the increase came largely from construction of community shopping centers for expanding residential areas.

Industrial building continued its decline of the last year, falling $2,000,000 to an estimated June total of $110,000,000.

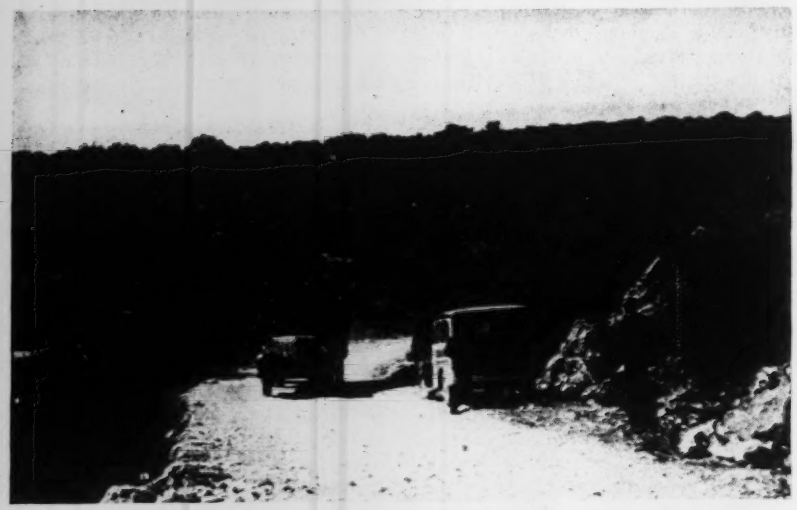
Public construction in June climbed to a postwar monthly peak of $387,000,000, 14 percent above May and 40 percent over June last year.

At the end of June, the Bureau's figures showed $7,700,000,000 spent on construction put in place during the first six months of 1948. This figure is 35 percent higher than the dollar volume for the first six months of 1947. House building accounted for more than half of the increase.

## Name power commission for N. W. Territories

Appointment of a federal government power commission for the operation and control of water power plants in Canada's Northwest Territories, which are administered directly by the Dominion Government through its Department of Mines and Resources, was approved by the House of Commons at Ottawa on June 14.

# FOREIGN DEVELOPMENTS



**ROUGH GOING—An "improved" road such as this Turkish highway costs more than it should in maintenance both for the road and the vehicles using it. Turkish engineers, with U. S. aid, are now working to surface and level their highway system's main routes.**

**Turkey**—Turkey has taken a fresh grip on her highway problems and in the last six months has hammered out an entirely new pattern to govern development of her national system of roads. In the planning of the new program, from administration and finance to construction and maintenance, the Turkish government has had the advice and assistance of U. S. technical experts lent under the Greek-Turkish Aid Act of 1947.

During the first half-year of active cooperation, the Turkish Ministry of Public Works and its aides from the United States made a great record of accomplishment, according to H. E. Hilts, deputy commissioner of the U. S. Public Roads Administration, who heads the American highway group in Turkey. Mr. Hilts had the double satisfaction of consummating a working agreement with the Turkish minister of public works and of seeing a new national highway bill drafted on the basis of American experience extending back to the original U. S. Federal Highway Act of 1916.

Technical and physical achievements during the first six months have laid a firm foundation for a permanent program. The public works ministry and its department of roads and bridges have revamped their organization and procedures to take care of all highway functions from top management to field maintenance. Active work has been started on field surveys, design and construction. Under eight U. S. instructors, 150 young Turks have learned to operate and maintain power equipment.

In number of personnel and in financial help, the amount of American aid is relatively small. Only 20 men—engineers and skilled operators and mechanics from PRA—make up the team. Money to implement the work comes out of $5,000,000 assigned to highways from the $100,000,000 for Turkey in the Greek-Turkish Aid Program. Most of this goes for machines to be used in construction and maintenance, including repair shops and garages. Much of the equipment is bought from war surplus stocks overseas. Of the remaining funds for Turkey, the great bulk is earmarked for military purchases—army, air force and naval.

### Collaboration at all levels

Last October, the U. S. departments of State and the Army decided that the aid to Turkish highways should, if possible, be administered by PRA in order to permit development of the program—primarily for military objectives—in proper relation to extensive civilian highway improvements contemplated by the Turkish government.

The public roads group has collaborated with Turkish highway authorities at all levels of administration and operation. Each of the Americans works alongside a lead man who will continue the same duties after the American leaves Turkey. An interpreter is permanently assigned to each such pair of highway specialists.

As reorganized in the pattern advocated by American experience, the department of roads and bridges has set up separate branches for : (1) administration; (2) finance and control; (3) surveys, design and plans; (4) construction and maintenance; (5) research. The organization functions through division and district offices in the same way that PRA operates in the United States.

Turkey covers an area about equal to Texas and Oklahoma. Before last Dec. 2, the Turks had studied the division setup for their highway activities and had created ten divisions to blanket the 63 vilayets (provinces) in their country. Within the ten divisions, they have marked out a total of 58 highway districts, each about four or five times the size of a midwest county. So far as possible, the borders of the districts correspond with the boundaries of the vilayets.

### Highway system 15,100 miles long

The national highway system has a length of 15,100 miles. Of this length, 626 miles is paved, and 7,250 miles is passable at all seasons. Until the new change in concepts took place, highway engineering had either employed minimum grading or followed railroad practice, with little use of rolling grades or regard for sight distances. A 14-ft. roadway was considered adequate, and bridges were generally single-lane.

Prime objective of the new highway program is to develop a network of two-lane all-weather roads. The roads will be improved by stage construction. On betterment work, the adopted normal cross-section calls for 6 meters (about 20 ft.) of stabilized soil, gravel or macadam on a 9-meter overall width of subgrade. Shoulders will be stabilized.

As master policies governing highway design, the Turkish ministry has adopted: (1) rolling of grades, (2) design speeds for sight distances, (3) American H-15 S-12 loading for structures, and (4) the general principles of the bridge specifications of the American Association of State Highway Officials. All bridges hereafter will have roadways at least two lanes wide.

The Department is now making its own surveys and designing its roads and structures, instead of leaving most of this work to the contractor, as is commonly done in Europe. The department makes the plans and writes the specifications, and uses a contract form similar to those used in the U. S. A.

## Public Works . . .

**Australia**—The Australian government has made little headway with the construction of its national capital at Canberra. Most government departments are reluctant to move away from the state capitals, and it looks as if Melbourne is to remain the actual federal capital for some time to come.

The federal government has recently purchased property in the north of Melbourne. Buildings on this site will be demolished to make room for a center of government offices. Construction on this project, which will cost about $10,000,000, will not begin before 1949.

The Queensland state government is spending $80,000,000 this fiscal year on public works including road, bridge and street work as well as waterworks, sewerage and electric power plants.

**Argentina** — The government has voted about $10,000,000 for financing the 1948-49 plan of the National Commission on Apprenticeship and Professional Orientation. Part of this sum will be used in constructing a new building to be named the National Workers University.

**New Zealand**—The Palmerston North city council has approved a $500,000 water supply project including a new dam with a 140 mg. storage capacity. Plans also include a modern filtration and purification plant.

**Puerto Rico**—Appropriations totaling $13,782,963 have been made available to the Department of the Interior which will undertake a large construction program in the forthcoming fiscal year. In addition to this sum, the Insular Government will receive a Federal grant of $3,000,000 for highway construction.

## Transport . . .

**Argentina** — The Argentine State Railways have benefited by approval of grants for construction af additional repair shops and warehouses and for remodeling of rolling stock. Funds have also been earmarked for new lines and other improvements totaling in cost about $400,000,000 a government announcement said.

**Venezuela**—Traffic regulations forbidding parking on the narrow streets of Caracas have resulted in a noticeable speed-up in traffic. The city council is now considering an underground parking space project since surface parking facilities available and in the planning stage are expected to prove inadequate.

# ENGINEERING IN TEL-AVIV

*Editor's Note—The following is extracted from a letter received from E. Per Sorensen, project engineer for the Knappen, Tibbetts Engineering Co. of New York City, who is engaged on a port project in Tel Aviv. Mr. Sorensen arrived at his post only a few days before the new state of Israel was proclaimed. He has been carrying out his duties under some difficulties, not the least of which is an occasional bombing and strafing.*

Our job consists of building a second lighter port for Tel-Aviv. Mr. Knappen was here in February and made a couple of sketches. We came over to do a quick job; to let a contract for a couple of miles of concrete sheetpile wall and to design all the facilities that go with this kind of a job.

We were delayed from the outset because the local people wanted us to explore other alternatives for the extension. We did so and emerged after two weeks with an alternative solution which was accepted with a gratifying amount of acclaim. This solution, however, involved the construction of a seawall to provide for land reclamation, so a considerable amount of rock and soil exploration would have to be done before the final location of the seawall could be decided upon.

We were just about to organize this work, when the war came and the port of Tel-Aviv became one of the prime targets of the air raids. On relatively calm days we got some field work done though not much, but from today on we expect to go ahead full speed. By the end of this month, we shall finish our plans and specifications hoping that contractors will be available for construction.

The difficulty is lack of manpower. Most able-bodied men of this new nation are directly involved in the war effort. The contractors are left with old men and generally unskilled labor. The seawall, if construction is started, must be completed before the rough season, or about November 1. Therefore, if we cannot get manpower right away, we shall have to postpone construction until next year.

The country here is like Southern California, dry and sunny. The people you meet and deal with are first-class, straight shooters and not a word of complaint. They know what they are up against and they have got the courage that goes with fighting with your back up against a wall. They have done wonders to the country, at least pudged from the little I have seen on the road from Haifa to Tel-Aviv, and they will do even more if they get a chance.

**Greece**—The Corinth Canal, blocked by German demolitions since 1944, has been ceremoniously reopened. Work of clearing the canal will continue, but normal traffic will be handled by the end of August (*ENR* July 1, p 5).

## Industrial Development . . .

**Chile**—A new sulphide copper ore plant to cost an estimated $60,000,000 will be constructed at Chuquicamata, Chile, by the Chile Exploration Co.—a subsidiary of the Anaconda Copper Mining Co.

The plant, with capacity to produce about 300,000,000 lbs. of copper a year from sulphide ores of the mine, will be built by Foley Brothers, Inc., of Pleasantville, N. Y.

The Chuquicamata ore body of Chile copper is said to be the greatest known copper reserve in the world. The Chile Exploration Co. will spend $130,000,000 over a period of years for new plants and other facilities, and installations now contemplated should be in operation by 1952, officials said.

## Tunnels . . .

**Argentina**—Two U. S. firms hold contracts to work with Argentine engineers on the Riachuelo traffic tunnel to link Buenos Aires with Mar Del Plata, the country's largest resort center. The eight-lane highway passage will be the first underwater vehicular tunnel in South America.

Knappen Engineering Co., in collaboration with the Argentine firm SADOPYC, have already begun preliminary work on a $137,000 design contract. Parsons, Brinckerhoff, Hall and MacDonald of New York City, are serving as consultants for the Belgian firm of Frankinoul, of Liege, who also hold a $95,000 design contract on the job. These firms have previously collaborated on tunnels in Europe and elsewhere. These design contracts and two others with a British and a German firm must be completed by Dec. 15, 1948, at which time one of the four firms will receive the general construction contract, which has been estimated at $25,000,000.

## Gives new medical school to Univ. of Pittsburgh

Spurred by an anonymous donation of $3,000,000 for a new medical school, the University of Pittsburgh, Pa., has started a $16,000,000 building drive.

Complete building program comprises: A medical center: a 10-story, $3,200,000 medical school facing Pitt Stadium; a 10-story $2,250,000 building housing clinical wards and labs; a $4,050,000 nurses' home; a $2,500,000 library; a $3,700,000 science building; a $2,250,000 gymnasium; a $1,000,000 student center; and a $300,000 field house.

At present Pitt has 17 buildings valued at $21,295,000.

## Uphold state order for town sewage plant

In a requested opinion, Attorney General William L. Hadden of Connecticut recently declared that the town of Portland must treat sewage at the order of the State Water Commission. The town now discharges untreated sewage into the Connecticut River.

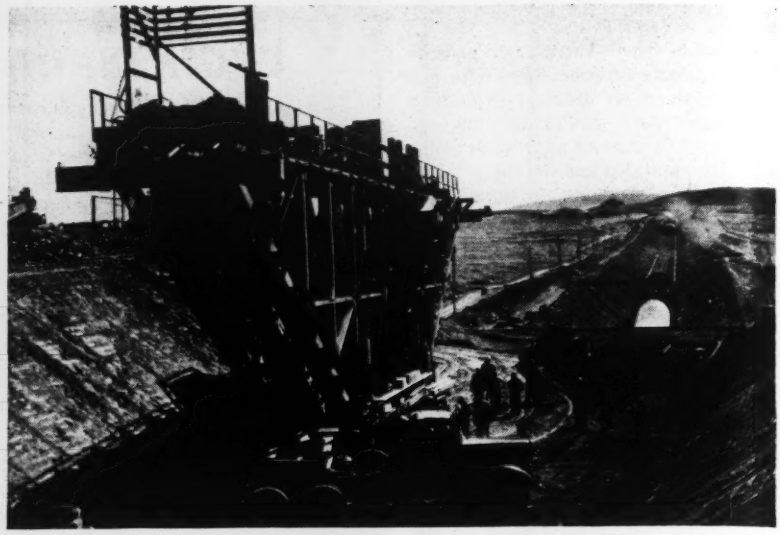
Town officials had refused to obey the Water Commission order on the ground that a special act of the General Assembly had exempted Portland from the order. In 1915 the assembly had granted the private Portland sewer company the right to empty sewage, garbage and drainings into the Connecticut River, and the town took over this company and contended that it succeeded to the special right to empty residue into the river.

## Enlarge sewage disposal plant at Baltimore

Extensive expansion of the Back River sewage-disposal plant at Baltimore, Md., is now under way, J. J. Hunt, chief of the Bureau of Sewers, has reported.

The filters are capable of handling 125 mgd., but occasionally as much as 220,000,000 gallons of sewage are delivered to the plant in a 24-hour period. At a cost of more than $646,000, the daily capacity of the plant's trickling filters is being increased to handle 200 mgd. At present more than 125 mgd. of sewage are delivered to the plant and some of it must be dumped into Back River after receiving only partial treatment.

The distribution system through the filters is to be completely rebuilt to insure the utilization of a greater area of the stone beds.



**TRIMMER MOVING—Special haulage equipment was brought into play when the Winston-Utah Construction Co. moved its trimming and lining machines along various sections of the West Canal of the Bureau of Reclamation Columbia Basin Project in Washington. The trimmer here is being put in place for a new run after by-passing siphon section of the canal.**

## Large earth fill dam planned for Saskatchewan

The first public announcement of a long-discussed irrigation and power dam on the South Saskatchewan River in the province of Saskatchewan has been made by Canadian Agriculture Minister Gardner.

He said that the dam would irrigate 500,000 acres, and would supply power for all the industries which could be started in southern Saskatchewan. The dam would be built by the Prairie Farm Rehabilitation Branch of the Department of Agriculture and would be erected with federal financial aid. It is estimated that construction of the entire scheme might take ten years. Eighteen months will be required for the necessary preliminary exploratory work.

## U. S.-Canada commission to consider flood aid

The International Joint Commission of the United States and Canada will meet July 27 at Bonners Ferry, Idaho, to consider problems raised by the recent serious floods of the Kootenay River.

The meeting was called at the request of Governor C. A. Robins, of Idaho.

The commission has pending before it a reference from the governments of the United States and Canada requiring a study and recommendations on the entire Columbia River Basin.

## Large dam to create a 26-mi. lake in Maine

William F. Wyman, president of Central Maine Power Co., has announced company plans to proceed with the construction of a dam at Long Falls on the Dead River, a tributary of the Kennebec. Participating with Central Maine Power on the project, which is expected to be completed by mid-1950, will be the Hollingsworth & Whitney Co. and the Great Northern Paper Co.

The dam, which will be 45-ft. high and 500 ft. long, will create a regularizing reservoir 26 miles long, covering some 15,000 acres, a large part of which is swamp land. This lake will contain nearly 12,000,000,000 cu. ft. of water and will increase the Kennebec River's present water storage by one-third.

## Committee to tackle urban traffic needs

Urban transportation problems will receive attention of a committee formed for 1948-49 by the Chamber of Commerce of the United States.

The committee will issue an illustrated booklet on solutions of off-street parking problems, and also urge adoption of traffic improvements.

Under the chairmanship of Chamber Director Laurence F. Lee, the committee will co-sponsor the second Business Men's Conference on Urban Problems at Detroit this September.

## PERSPECTIVE . . . . .

### The federal government enters pollution control

The new Water Pollution Control Act (Public Law 845) gives the federal government authority to enforce abatement of any pollution that creates a health or welfare hazard beyond the borders of the state where it originates. To protect the prerogatives of the states, the law carefully defines the basis and the procedure for enforcement action.

Municipalities, sewer districts and industries will come under surveillance of the new law—particularly if they discharge untreated sewage or wastes into waterways that cross state boundaries. The act restricts federal enforcement to pollution of interstate waters that endangers the health or welfare of persons in a state other than the one in which the discharge originates.

#### Enforcement procedures

Enforcement procedure consists of four steps: (1) a formal notice to the offender; (2) a second notice, if the first one does not have the desired effect; (3) a public hearing; and (4) a court suit by the United States, with the consent of the state water-pollution agency having control where the discharge occurs.

As the first step, the law directs the Surgeon General (head of the U. S. Public Health Service) to notify the persons responsible for any discharges that cause or contribute to dangerous interstate pollution. At the same time, the Surgeon General is required to inform the state or interstate agencies having jurisdiction about the notices.

If the violators do not take steps to correct the condemned conditions within a reasonable time limit specified in the first notice, the Surgeon General sends a second notice. This time, when he informs the state water-pollution agency of the second notice, he may recommend that that agency bring suit against the offenders.

After a "reasonable" time, according to the new law, if the offenders have not started action to abate the pollution and if the state or interstate agency has not brought suit, the Federal Security Administrator (head of the executive branch that includes USPHS) is to call a public hearing before a board of five or more persons. This board makes recommendations, based on the evidence taken at the hearing, to the administrator.

Time is to be given the offenders to comply with these recommendations. If they do not signify compliance within that time, the administrator then may ask the U. S. Attorney General to bring suit, with the consent of the state or interstate water-pollution agency—or other authorized agency or officer. In deciding such a case, the law says that the court shall give "due consideration to the practicability and to the physical and economic feasibility of securing abatement of any pollution proved."

#### Financial and technical aid

Enforcement is only one aspect of the new law. Its main purpose is to encourage the states to greater pollution abatement through technical and financial assistance by the federal government (*ENR* June 24, vol. p. 999). The next Congress is expected to appropriate some $25,000,000 for the first year of an authorized five-year program.

Discussing implications of the new law, federal security administrator Oscar E. Ewing recently said that the pollution-control program "will not require the indiscriminate building of elaborate treatment works. All water uses of each stream will be considered, and the treatment recommended will be based on these uses. Due regard will be taken of the health, welfare and economic considerations of the particular situation upon the national welfare."

## States OK Ohio River sanitation pact

Interstate cooperation toward formation of a sanitation district in the Ohio River watershed (*ENR* May 6, vol. p. 676) culminated recently in the signing of the Ohio River Valley Sanitation Compact in a ceremony at Cincinnati, Ohio.

Ending a 13-year effort to rid the Ohio River of its pollution problem, executives of Indiana, West Virginia, Ohio, New York, Illinois, Kentucky, Pennsylvania and Virginia participated.

President Harry S. Truman, in a telegram to the meeting, announced his signing of the Barkley-Taft anti-stream pollution bill, providing a $22,500,000 loan fund to aid communities cooperating in the compact, and $4,000,000 for construction of a stream sanitation laboratory at Cincinnati.

Area within reach of the Ohio and its tributaries totals 200,000 square miles, with a population approaching 25,000,000 people.

The compact creates a commission of three representatives from each state involved and three federal government representatives. The commission is authorized to aid state or local bodies on specific problems of waste disposal and to order any municipality, corporation, or individual discharging waste into streams to cease or correct such pollution.

Cincinnati has been chosen permanent headquarters of the new Ohio River Valley Sanitation Commission, and Hudson Biery, head of the Ohio representation, has been named general chairman.

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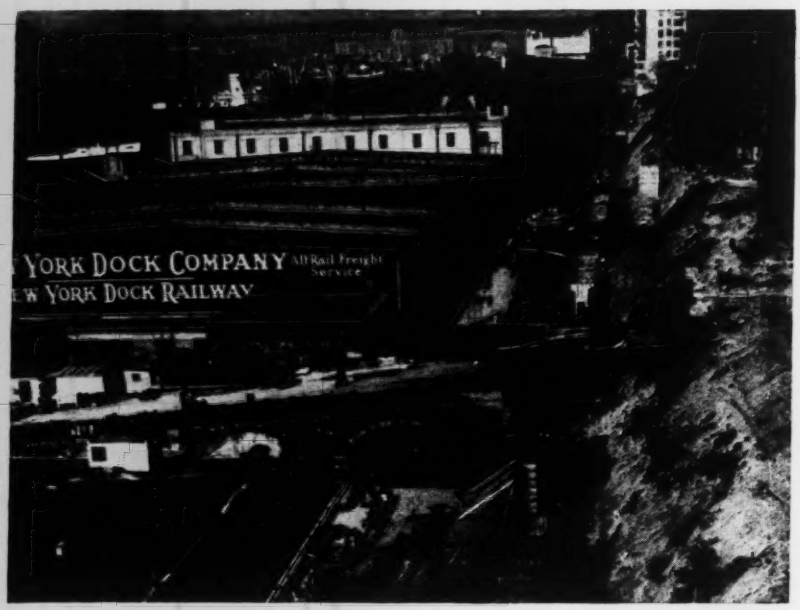
The Housatonic Valley Planning Association has been organized to fight pollution of the Housatonic River in Connecticut. Charles Downing Lay, of Stratford, will head the organization as president, and state officials and civic groups have indicated cooperation.

U.S.B.R photo

**FIRST WETTING—Sandy bottom of irrigation canal in the Payette Division of the Black Canyon Project in Idaho turns muddy brown as first water is released. Nearly 13,000 of the 25,000 acres to be irrigated by the project received first water at the end of June.**

# MUNICIPAL AFFAIRS




**THINNING THE JAM—Superhighways, such as this section of New York's Brooklyn-Queens expressway, are principal engineering solutions for speeding motor traffic through congested business areas of many cities.**

Long-range proposals for easing municipal traffic jams by construction of superhighways and expressways dominated the municipal engineering picture last week.

One of the items represented a disappointment for advocates of the superhighway as the solution for increasing congestion, when the Duval County Board at Jacksonville, Fla. rejected a plan for a $22,500,000 superhighway project.

On the positive side of the traffic planning picture were: A recommendation by the Maryland State Roads Commission for a $13,000,000 program to relieve traffic congestion in downtown Hagerstown through the conversion of 14 streets to one-way traffic, construction of numerous bridges and underpasses, elimination of curb parking and immediate installation of more traffic lights. The program was based on a thorough survey that attempted to take into account traffic conditions up to 1970.

At Milwaukee, Wis., the firm of De Leuw, Cather & Co. began a survey of the city's traffic problem, in advance of the signing of a $70,000 contract to cover cost of the survey. A recommendation submitted to the city of Memphis, Tenn., by Smith Dibble & Co., of Columbia, S. C., called for eight major changes in the city's traffic picture, including creation of six one-way streets in the business district, use of bus stops on the far side of intersections throughout the city, widening and extension of several streets, construction of a traffic circle, rerouting of transit lines to fit the one-way plan and eventual elimination of parking on Main Street.

In New York State, the Department of Public Works began studies of traffic congestion in the cities of Ogdensburg and Olean. The studies precede final planning for a state financed system of urban arterial routes to be undertaken within the cities.

In addition, New Orleans, La., prepared to advertise for bids on about $1,000,000 of street improvement and subsurface drainage work, and the city council of Houston, Texas, voted $1,000,000 to buy street right-of-way in the city for another section of the Houston-Galveston superhighway.

St. Paul, Minn., let a contract for $350,000 to the Clement F. Sculley Equipment Co. to widen the pavement on University Avenue for a distance of one mile from 69 ft. to 95 ft. The widened street will correspond with other sections of the avenue which are as wide as 120 ft.

The Duval County Board in Jacksonville rejected a superhighway proposal by the state road department, and rescinded an earlier resolution that had tentatively pledged the county's surplus gasoline revenue as security for a bond issue to finance the proposed Jacksonville superhighway project.

Big stumbling block in acceptance of the proposal, as prepared by the state department, is $12,000,000 that was to have been contributed by state and federal sources. These funds would have been used to construct feeder roads to the proposed three bridges and their access roads.

County commissioners declared that the present proposal and plan are at variance with the original proposal submitted in 1947, on which agreement was first reached.

## Airport programs

Fifty-seven grant offers totaling $7,215,000 in federal funds were made by the Civil Aeronautics Administration to local airport sponsors during the period between May 15 and June 15, an announcement by CAA said last week.

The largest grant to date in the entire program was made during the period to Chicago, in the sum of $2,600,000, for the improvement of the Chicago Orchard Airport. The master plan for this field would eventually make it the largest civilian field in the country, with ten 8,400 ft. runways occupying over 6,000 acres.

Other large grants included: $120,000 to Rochester, Minn.; $102,000 to Fayetteville, N. C.; $650,000 to Pittsburgh, Pa.; $346,500 to Richmond, Va.; $450,000 to Charleston, W. Va., and $93,000 to Waynesburg, Pa.

## Bridges

Also on the traffic congestion front were numerous plans for construction of large highway bridges in a number of states.

Among these were an announcement by the Washington State Toll Bridge Authority that it was considering construction of a floating bridge to span Fletcher Bay between Bainbridge Island the Kitsap Peninsula to provide easier access from Bainbridge Island and Kitsap County west of Seattle, Wash.

Charles E. Andrew, chief consulting engineer for the Authority, said that the bridge under consideration would include either retractable pontoons or a submersible pontoon, in either case the pontoon would be a 500-ft. section large enough to pass vessels of the heaviest draft. Small vessels would pass under a 200-ft. stationary span that would have a 28-ft. clearance at high tide.

State officials said the bridge would be the first floating structure to be used over a body of water with a large tide change (up to 17 ft.). Cost is estimated at about $7,000,000—less than half the

estimated cost of a cantilever bridge over the 3,500-ft. channel. Construction is dependent upon whether the state can obtain investment banking support for an $18,000,000 bond issue that would finance a general state-operated ferry system to replace the present private system.

Highway officials and civic leaders representing Kentucky and Illinois were reported to have reached an agreement on a proposed $3,000,000 bridge across the Ohio River south of Shawneetown, Ill. The bridge would link Illinois route 13 and Kentucky routes 56 and 58, now served by a ferry.

## Sewage disposal

Commissioners of Wilmington, Del., considered a proposal for a $6,000,000 sewage treatment and disposal plant for the city planned for construction on flatlands bordering the Delaware River on the outskirts of the city.

The program was submitted by the firm of Whitman, Requardt and Associates, consulting engineers, who were commissioned by Wilmington officials last year to survey sewage disposal and other pollution in the area. Plans were revealed at the annual meeting of the Interstate Commission on the Delaware River Basin (INCODEL).

Mr. Requardt told the commission that at present some 30 mgd. of sewage and industrial waste now flow from 31 outlets into the Christina and Brandywine rivers. This waste is to be diverted into the new treatment and disposal plant from where it will be pumped directly into the Delaware River. The plan would involve construction of diversion sewers as well as building the plant itself.

Other planning for sewage disposal works during the week included: the announcement that the Anderson, Ind., city engineer's office is conducting a survey of the city's present sewage disposal facilities, and has now under way a long rage improvement program that contemplates eventual replacement of 50 percent of the city's sewers.

## City planning

The Little Rock, Ark., city council public works committee last week approved a proposed new planning ordinance that would increase personnel of the planning commission; require that the planning director be a registered engineer or architect; and establish a minimum planning staff with an engineer-director.

At Milwaukee, members of the city housing authority said they were "shocked" when they found that bids for construction of 580 housing units at Northlawn and Southlawn—suburban areas—have jumped 62 percent over estimates. Richard W. E. Perrin, housing authority director said that unit costs, based on low bids, would rise from an estimated $8,100 to $13,100.

In New York City, Thomas F. Farrell, chairman of the New York City Housing Authority, announced that postwar permanent public housing programs have been expanded almost 150 percent in the last year. Projects that had reached the construction phase totaled eight a year ago, and now total eleven. Fifteen additional projects will be under construction by the end of the year to provide housing for thousands of city residents, Mr Farrell said.

**RESEARCH BUILDING—Bids will be sought this month on a 13-story brick structure to house clinical research facilities of the National Institute of Health at Bethesda, Md. The structure will provide space for 500 patients, as well as scientific laboratories of all types. The Public Buildings Administration staff is carrying out design of the structure.**

## Parking meters

At Milwaukee, Wis., city councilmen delegated the city attorney's office to prepare a city parking meter ordinance that would provide for five cent meters and segregate funds for purchase of new meters, purchase of off-street parking sites and amortization of revenue bonds. Under the proposed ordinance, meters would not be installed on any street used by mass transportation vehicles.

Mt. Vernon, Ohio, awarded a contract for installation of 230 parking meters, and one other Ohio City—Bowling Green—will receive bids this month for 300 meters and their installation.

Five Indiana cities, meanwhile, prepared either to open bids for meters, or to install them. South Bend announced that it would receive bids for 950 meters; Rochester will install meters in its business district; Columbia City awarded a contract for 200 meters; Wabash will install 275 meters, and Bedford, which already has started installation of the meters, announced it would begin strict enforcement of ordinances controlling use of the machines immediately.

## Water supply

Toledo, Ohio, considered a request from five suburban communities for a supply of Lake Erie water to a new 19-mile water line from the city. Several of the smaller communities said they are seeking, among other things, fire protection. Two of the communities have no independent water supply, and their fire departments are compelled to carry portable tanks when they go out on call.

The City of Bedford, Ind. is planning a $300,000 expansion program for its municipal waterworks to bring the waterworks capacity from the present 2.5 mgd. to 4 mgd. Mayor Ivan H. Brinegar said that the city will ask the Indiana Public Service Commission to study its water rate structure in an effort to establish a higher minimum rate.

Wide World Photo

**TOP LEVEL FARMERS — Eleven stories above New York's busy streets, three gardeners of the Rockefeller Center staff tend their grass and flowers. More than three and one-half acres of space atop various buildings in the famous business center are devoted to landscaped gardens.**

## Random Lines *from an editor's notebook . . .*

***. . . In which is the story of a 104-year-old "concrete" structure that finally gave way under pressure of alterations***

One of six sections of the "Milton House," built at Milton, Wis., in 1844, and regarded by local historians as the oldest concrete structure in the United States, collapsed recently—just one day before the Milton Historical Society was to take the building as a museum.

The cause of the disaster was prosaic enough. A succession of tenants had cut holes through supporting foundation walls in order to obtain access to the basement. As a result the walls gave way under heavy loads.

But the incident served to bring the old hotel to the attention of engineers. Accounts gathered by F. B. Coon, curator of the Milton Historical Society, vary greatly in some details, but a study of them reveals that the building material was a forerunner of modern concrete, since it is formed of burned limestone, apparently manufactured at Milwaukee, and mixed with local sand and gravel.

The Milton House was built in 1844 by Joseph Goodrich, an early and prosperous innkeeper of Milton, who found his trade outgrowing the two log houses in which he had started.

According to a book *Homes for All*, written in 1850 and long since out of print, Mr. Goodrich when he planned his new hotel was faced with the problem of bringing lumber over a long distance into the treeless Wisconsin prairie. Casting about for local material, he hit on the idea of mixing lime with water and the local aggregate. Oak planks were used for forms (and later used for flooring) and the forms were raised after each day's pour.

"The walls are as hard as stone, or harder," enthused the author of *Homes for All*, and Mr. Goodrich offered to let me strike the walls with a sledge for six cents a blow—as that would be enough to pay for any damage."

Originally, the Milton House contained eight separate sections of two stories each, and a 3-story 6-sided tower that was Mr. Goodrich's private residence. Six of the original sections were standing at the time of the recent accident. The "tower" section contained a central heating plant.

The structure was used as a hotel until about 1900, and then it was turned to other uses—among them as headquarters for a printing firm and as a storage warehouse. It was again a rooming house when the collapse occurred. —*EEH*

### Home Builders Assn. Creates technical dept.

Establishment of a new technical services department to develop cost-saving construction methods and to aid home builders with technical problems has been announced by the National Association of Home Builders.

The department will be headed by Carl G. Lans, Arlington, Va., former assistant technical director in the underwriting division of the Federal Housing Administration. Mr. Lans, with experience as an architect and engineer, is well-known to builders throughout the country because of his FHA work.

A prime objective of the new department, according to Frank W. Cortright, executive vice-president of the NAHB, will be to develop the "economy house" which has been sponsored by the association. This house, which varies in different localities, is being developed as the answer of the private home builder to the need for a good house of acceptable quality and arrangement that can be built at less cost.

### Army engineers change district officers

Four Engineer officers of the Corps of Engineers have recently undertaken important new assignments. The changes involve the district offices in Albuquerque, Baltimore, New York and Greece and the executive office of the Chief of Engineers.

Col. William W. Wanamaker, district engineer, Baltimore, on July 6 became in addition acting district engineer of the New York District. He will fill both posts until another Engineer officer is appointed to the Baltimore office. Before his appointment to Baltimore last fall, he had been in charge of design and construction of Garrison Dam.

In assuming his added New York duties, he relieved Col. David W. Griffiths, district engineer, Grecian District, who has filled in as acting district engineer for New York.

Col. Charles G. Holle, of the Office of the Chief of Engineers, left Washington at the end of June to take over duties as engineer of maintenance for the Panama Canal, succeeding Brig. Gen. Francis K. Newcomer, who is now governor of the Panama Canal Zone (*ENR* May 20, 1948, vol. p. 746). The new executive on the staff of the Chief of Engineers is Col. H. F. Hannis, until recently district engineer at Albuquerque, N. M. His successor in Albuquerque is Lt. Col. Joseph O. Killian.

### Engineers not covered by Canadian labor code

The new national labor code for Canada, finally approved by the House of Commons at Ottawa on June 17, excludes engineers from its provisions with the other "learned professions."

Engineers in Canada were not wholly in agreement on the question of being excluded from the provisions of the new code (*ENR* May 27, vol. p. 761). The Canadian Council of Professional Engineers and Scientists, representing fourteen professional organizations, asked that engineers be permitted to bargain collectively under the provisions of the code should that become necessary, but the Engineering Institute of Canada, the principal engineering organization in the country, and some of the provincial associations of professional engineers, asked that engineers be excluded.

# Central Valley plan aimed at 1951

Construction by the Bureau of Reclamation on the Central Valley project in California during fiscal 1949 will aim toward completion of essential primary works by 1951.

Emphasized in the interior department appropriation bill (*ENR* July 1, p. 1), the program for the next twelve months will concentrate on extending the Friant-Kern and Delta-Mendota canals, pushing work on the Tracy pumping plant and installing additional power facilities at Shasta and Keswick dams. Regional director Richard L. Boke announced the plans in Sacramento recently. The program is made possible by $41,358,900 that congress appropriated for Central Valley work, the largest annual appropriation yet made for this project.

On the Friant-Kern Canal, two more contracts will be let during the year. One is being advertised this month for 27 miles; the second, 17 miles in length, is to be let in the spring of 1949. A contract for 14½ miles of the canal recently was awarded to Ashback and Steenberg, Minneapolis.

At present, 74 miles of the canal is completed or excavated; concrete lining still has to be placed on about 10 miles of that length. By the end of the fiscal year, June 30, 1949, 132½ miles will be completed or under construction. Total length of the canal, to carry San Joaquin water south from Friant Dam to Bakersfield, is 153 miles.

For the Delta-Mendota canal, on the west side of the valley, bids recently were received for a 13-mile section. Another contract for 15 miles will be let late this fall, and a 17-mile section will be advertised late next spring.

Total length of this canal is 120 miles. Of this length, 13 miles is completed of the 26.6 miles now under contract. By next June 30, 71.6 miles will be completed or under construction.

Placing of concrete started last month at the Tracy pumping plant, preparatory to erecting the world's second largest pumping unit which will raise 4,600 cfs. of water from the Sacramento River into the Delta-Mendota Canal for use of the San Joaquin Valley's west side farms. The pumping station will be completed at about the same time as the canal.

At Shasta Dam, the fourth 75,000-kw. generator will go into service this month, and the fifth and final unit will be installed for operation next February. In the Keswick Dam powerhouse, two of the three 25,000-kw. generators will be installed.

Other Central Valley work scheduled for this fiscal year calls for completion of drum gates (adding 800,000 acre-ft. to the reservoir capacity) and 18 outlet valves at Shasta. Valves at Friant also will be completed.

Also this year in California, the Bureau of Reclamation will start the $37,000,000 Santa Barbara County water conservation project, using a $1,000,000 appropriation and $1,600,000 contract authorization to begin work on the 6-mile Tecolote tunnel, the Cachuma dam and the 30-mile south coast conduit of this project.

## Colleges announce plans for building programs

Construction programs that will aggregate several million dollars have been announced by several colleges and universities. Among the plans are:

A ten-year, $10,000,000 building program, now under way at New Orleans Theological Seminary. First buildings in the project will be four apartments to house married students and their families, and later structures will include a total of 43 buildings that will house faculty members, a chapel, an infirmary, dormitories, classroom buildings and offices.

The University of Missouri, at Columbia, announced that it will seek contracts during the summer months for a construction program that will cost nearly $10,000,000. Leslie Cowan, vice-president in charge of business operations, said that a major part of the program will be directed toward building dormitories, a Memorial Union hall, a chemistry building, an agriculture building and other structures.

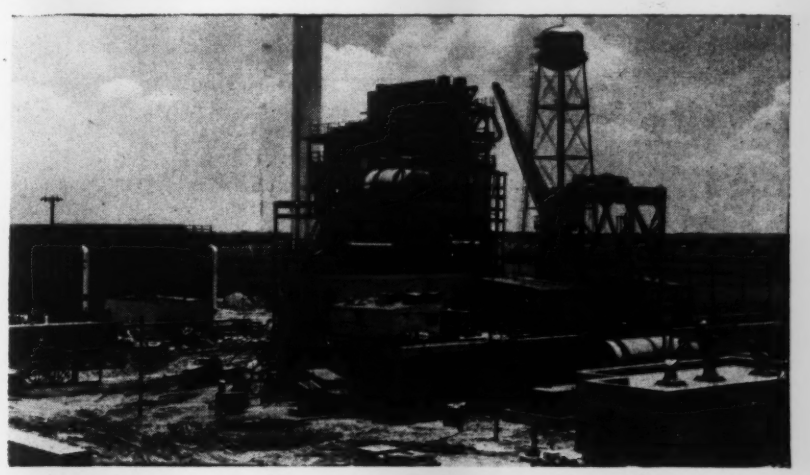
Illinois Wesleyan University, at Bloomington, announced plans for a $1,100,000 administration building to be known as the Shaw Administration Building, and also for a new university chapel.

In Indiana, the State Budget Committee approved construction of a new $600,000 practical arts building on the campus of Ball State Teachers College at Muncie. The three story brick structure will house classrooms, an industrial arts shop and kitchen facilities for home economics classes.

## Canadian provinces must build own roads

Intervention of the federal government of Canada in roadbuilding activities was turned down by Trade Minister C. D. Howe when speaking in the House of Commons in Ottawa on June 20. Western members of Parliament urged federal assistance towards the completion of the Trans Canada Highway as a first class road, suggesting that Canada should set up a federal Public Roads Authority similar to that in the United States.

Mr. Howe declared that building highways in the provinces on its own initiative was not a federal responsibility. He denied that the Dominion government was awaiting the onset of a depression before interesting itself in the matter. He said it is impossible to tackle a big project on account of lack of manpower.



**OUTSIDE POWER—Nearing completion at Jackson, Miss., is a new $4,500,000 semi-outdoor-type generating station for the Mississippi Power and Light Co. With an initial installation of 30,000 kw., the station is a part of a planned $40,000,000 expansion by the company. Ebasco Services, Inc., are engineers.**

# MEN AND JOBS

**Alton H. Sorenson, Salt Lake City, conducts structural safety test of the Utah fairgrounds grandstand—taking stress data on a slant beam. The test is being conducted by Caldwell, Richards & Sorenson. Individual sections of the grandstand are overloaded with sand bag weights.**

**Robert A. Painter,** Pulaski, Va., a graduate of Virginia Polytechnic Institute, has been chosen as assistant city engineer of Fredericksburg. He succeeds **D. A. Robertson.**

**Harold A. Cunningham** has been appointed project engineer for Allentown District No. 5 and Henry E. Caton for Uniontown District No. 12 by the Pennsylvania Highways Department. Announcement was made at the same time of the resignations of **Thomas W. Carrol** as resident engineer in District 6, Ardmore and **Lynn K. Copp,** project engineer in District 2-2, Clearfield.

**S. T. Harding, consulting engineer and professor of irrigation at the University of California, and Julian Hinds, chief engineer and general manager of the Metropolitan Water District of Southern California, see Friant Dam during a California ASCE convention field trip.**

**T. L. Corwin (left) and J. B. Cooke, civil engineers on the design of new hydroelectric installations for the Pacific Gas and Electric Co. in California, check progress while on a field inspection trip. Here they are visiting the nearly completed Electra diversion dam.**

**Representatives of the General-Shea-Morrison Co. of Seattle, Wash., successful bidders for the construction of Hungry Horse Dam and power plant, visit the site of the dam on the South Fork of the Flathead River in northwest Montana. A $43,431,000 contract, second largest in Bureau of Reclamation history, was awarded to the Seattle firm, a combination of 12 contracting companies. The dam is to be a concrete arch structure more than 520 ft. high with a crest length of 2,100 ft. and will create a reservoir to impound 3,500,000 acre-feet of water. Pictured at the dam site are: (left to right): C. W. Wood, general superintendent at the dam for General-Shea-Morrison; L. S. Gardner, excavating superintendent; B. H. Cook, vice-president of the General Construction Co.; and Gilbert Shea, president of the Shea Company.**

**Col. Homer B. Pettit,** Corps of Engineers, United States Army, was retired from active service recently after 30 years commissioned service. He was chief of the legal division, Office of the Chief of Engineers, Washington, D. C. Colonel Pettit was commissioned in the Corps of Engineers in 1918, and his foreign service included assignments in France and Germany during World War I, and in Panama from 1921 to 1924. His civil works assignments included details in the St. Paul, Minn., District and the Detroit, Mich., District. He was a member of an International Joint Commission with Canada to regulate the levels of the Great Lakes. He was once assigned to the New England Division as District Engineer and Acting Division Engineer. Colonel Pettit has announced the opening of a consulting engineer office in Suite 610 Stoneleigh Court, Washington, D. C.

**George A. Parks,** regional cadastral engineer of the Bureau of Land Management in the Territory of Alaska retired on June 20 after nearly 40 years of service, including duty as practical miner, chief of the Alaska field division of the General Land Office, assistant supervisor of surveys and public lands, and governor of Alaska. After resigning as governor in 1933 he returned to the engineering service of the department in 1934 and became district and then regional cadastral engineer.

**John C. Thompson,** associate engineer, has been appointed executive engineer and secretary of the water power and control division of the New York State Conservation Department to succeed **Russell Suter,** retired. Mr. Thompson has been engaged with the water power and control division since 1930. **Henry M. Schiller,** senior engineer in the division, will succeed Mr. Thompson as associate engineer. **George Natt** has been appointed senior engineer, succeeding Mr. Schiller.

**Philip W. Genovese,** North Haven, Conn., has been made a junior partner in the consulting engineering firm of Argraves & Mort, of 70 College Street, New Haven, Conn. He was a CEC lieut. commander during the war.

**Aaron P. Campbell** is vice-president in charge of the new office of Gilbert Associates, Inc., engineers and consultants, in the Oil and Gas Building, Houston 2, Tex.

## *Quick transition creates homes from barracks*

A huge reservoir of potential housing has been tapped and a heavy flow of dwelling units started into southeastern markets in the last few months through a mass production technique of converting Army surplus buildings into home units. This method has been devised by the Army Camp Wrecking Corp. at Camp Blanding, Fla.

In contrast to the programs followed in most Army surplus activities elsewhere, this home-building program includes conversion of the buildings to uniformly attractive dwellings not at all resembling the military structures from which the materials came.

Large buildings, which have been previously considered only usable for the materials salvaged when wrecked, are being converted into smaller units which are sold to be moved intact or reduced to a semi-prefabricated form. The standard 20 and 25-ft. widths used in most of the army buildings have made it possible to cut buildings of lengths as great as 156 ft. into several smaller dwellings.

Where necessary, extra rafters, studs and joists are added to make the buildings conform with building code specifications. New ends for the cut sections are built on jigs. Windows are added, where needed. All buildings are then painted and ornamental shutters made for the front.

### For lowest incomes

On account of the small amount of conversion necessary and the originally low purchase cost, sales prices for these buildings are within the range of the lowest incomes.

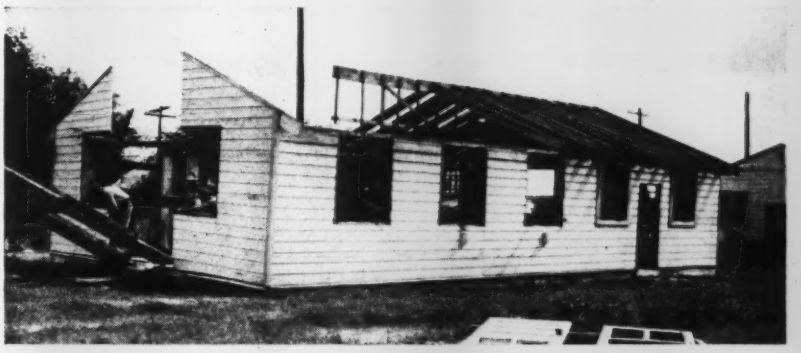
When buildings are pre-fabricated, walls come down in panelized sections while roofs and floors are dismantled. Joists and rafters are therefore in ready-cut lengths—reducing the cost of erection.

Contractors in the Jacksonville, Fla. area report that this program has opened home construction to a group which ordinarily would not be undertaking it.

The basic nature of the structure is also giving the buyer an option of carrying out the completion of the interior just as he pleases.

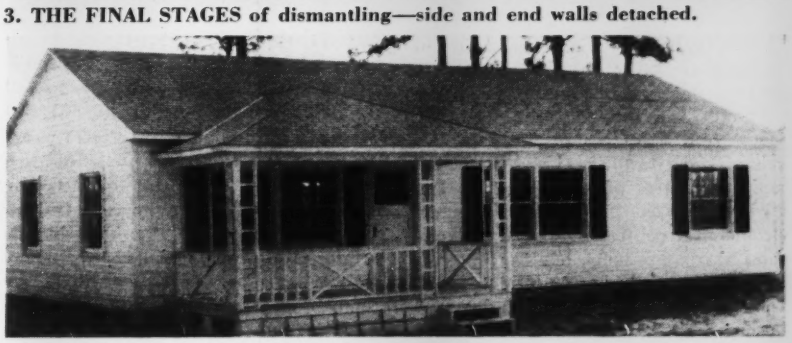
Project manager of the Army Camp Wrecking Corp. at Camp Blanding is Joseph S. Rose who for three years supervised the building of thousands of pre-fabricated buildings for airfields as a construction officer in the Army Engineer Corps. Today he is applying in a reverse fashion the technique he learned during the war.

**1. DEMOLITION BEGINS with the roof. Special nail-pulling tools are used.**



**2. SECTIONS ARE REMOVED carefully for re-use in new structures.**

**3. THE FINAL STAGES of dismantling—side and end walls detached.**



**4. A 25 x 46-FT. SIX-ROOM HOME ready for occupancy on a new site.**

# ENGINEERING SCHOOLS

***World-wide research in soils engineering by Cornell investigators this summer—Sanitary engineering at University of Missouri—Many faculty appointments***

A vast research program in soils engineering to analyze the influence of the world's principal land forms on engineering structures is sending four Cornell University engineer-investigators to widely-separated parts of the world this summer.

Professors Donald J. Belcher and Taylor D. Lewis, Research Associates Charles H. Ladenheim and Raymond J. Hodge, and several graduate assistants in engineering and geology will conduct field explorations in Greenland, Alaska, the Aleutian Islands, Europe, North Africa and the United States. Aerial photography will be utilized to speed the work.

"Trends in Engineering Education" is the title of a book by Dean James K. Finch of the School of Engineering, Columbia University, just published by the Columbia University Press. It is an analysis of the problems that face engineering schools. One of these problems, Dean Finch says, is the broadening of engineering curricula to include the basic subjects of a general education. Another is the challenge engineering schools now face in advancing both the fundamentals and applications of engineering science for the good of the general economy.

The election of Rear Adm. John J. Manning, chief of the Navy's Bureau of Yards and Docks, Washington, D. C., as a trustee of Rensselaer Polytechnic Institute has been announced. He was graduated from R.P.I. in 1915 as a civil engineer.

**Sanitary Engineering**

The University of Missouri is offering graduate study in sanitary and public health engineering. In announcing the course, Dean H. A. Curtis says: "The rapidly expanding application of engineering skills to the solution of public health problems affords an opportunity for the engineer who can accept and develop new ideas in this field. To the traditional and important sanitary control of water supplies and sewage disposal have been added environmental control of gas, liquid and solid waste products, engineering control of atmospheric pollution, insect and rodent control, food and milk sanitation, and nation-wide stream pollution control activities."

**Building Construction Course**

Alabama Polytechnic Institute, Auburn, is offering a building construction course. A degree of Bachelor of Building Construction will be given graduates of the course.

**Faculty Appointments**

**Clarence E. Deakins,** director of student services at Illinois Institute of Technology, has been named dean of students, succeeding **Dean John F. White** now dean in charge of development. Dean Deakins joined the Illinois Tech in 1946 after a year and a half as director of public relations and admissions at Missouri Valley College in Marshall, Mo.

From 1935 to 1941 he was registrar and admissions counselor at Lawrence College, Appleton, Wis., and during the 10 years preceding 1935, registrar of James Millikin University, Decatur, Ill., from which he obtained his bachelor's degree in 1923. In 1933 he obtained his master's degree from the University of Illinois.

Faculty promotions announced in the civil engineering department of New York University include these: **Thomas C. Kavanagh,** instructor to assistant professor aeronautical engineering; **Chi Teh Wang,** assistant professor to associate professor meteorology; **Hans Panofsky,** assistant professor to associate professor engineering drawing; and Lewis O. Johnson, assistant professor to associate professor.

**GROWING RESPONSIBILITIES of the engineer and scientist in public affairs are being discussed by James D. Mooney, president of the Willys-Overland Motors, Inc. (left) and President T. Keith Glennan of the Case Institute of Technology, Cleveland, Ohio. Mr. Mooney is a trustee of the institute, Dr. Glennan, fourth president of the 68-year-old technical school, is a 1927 graduate of Sheffield Scientific School, Yale University, and was inaugurated as president of Case on May 21.**

**T. J. Kent, Jr.,** 30, director of city planning at San Francisco, Calif., and a key figure in shaping the city's master plan for development, resigned May 27 to become associate professor of civic planning at the University of California, Berkeley.

**John F. White,** dean of students at Illinois Institute of Technology, has been named dean in charge of development. Dean White will be concerned with the institute's current $15,000,000 development program. Except for administration of student affairs, he will continue his present duties in connection with the formulation and execution of academic policy. He was graduated from Lawrence College, Appleton, Wis., in 1941, and obtained his master's degree in education from the University of Chicago in 1944.

**James R. Griffith,** who has taught engineering at the Massachusetts Institute of Technology, Washington State College, Armour Institute of Technology and Oregon State College, has been named dean of engineering at the University of Portland, Ore.

**John K. Mayer,** associate professor of experimental engineering, Tulane University, has been promoted to full professor.

University of Florida has appointed **Cecil W. Goyder,** assistant research engineer, Engineering and Industrial Experiment Station, and **Donald C. Bunting,** assistant research engineer to the staff of the College of Engineering.

**John W. Briscoe,** recently with the bridge department of the Chicago, Burlington and Quincy R. R., has been appointed an instructor in civil engineering at the University of Illinois.

Rensselaer Polytechnic Institute has promoted the following members of the faculty: **Joseph S. Kinney** to professor of civil engineering; from instructors to assistant professors of civil engineering. **Francis T. Griffin** and **Robert K. Palmer.**

**John E. Burchard** has been appointed dean of humanities at the Massachusetts Institute of Technology. He succeeds R. G. Caldwell, who retires July 1. Mr. Burchard is an M.I.T. graduate. At one time he was assistant to the institute's head of the department of civil and sanitary engineering. For some years he was director of research of Bemis Industries, Inc. Lately he has been director of the M.I.T. libraries. The division of humanities is coordinate with the M.I.T. schools of science, engineering and architecture, and among other activities includes the departments of business and engineering administration.

# Prefab track carries midget racing autos

A new ⅓-mi. prefabricated track for midget auto races was recently used in New York City's Polo Grounds, where such races alternated with baseball games and other events. The sponsor is Small Car Enterprises, headed by Alexis Thompson.

The track is designed for use in any standard ball park and will not injure the turf. Demountable, of aluminum construction with an interlocked wood surface, it is set up with stainless steel connectors. No hand tools or bolts are used. Stresses were calculated to take care of tremendous impact loads caused by cars going into banked turns.

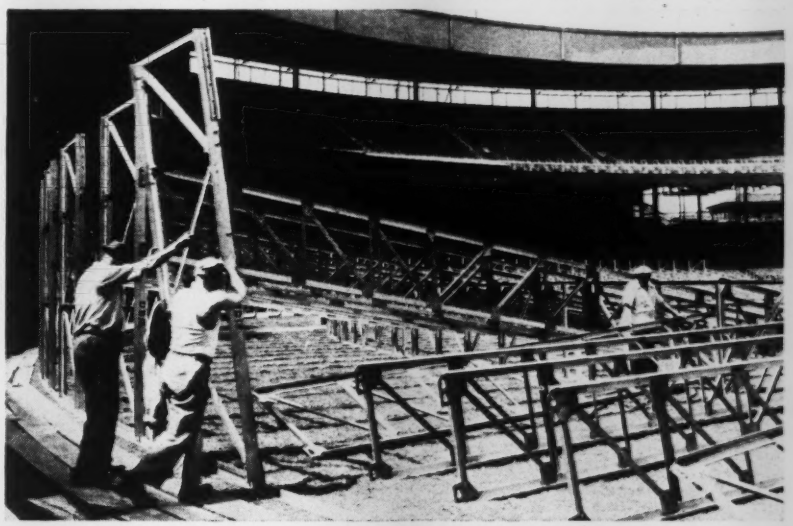
The aluminum alloy of the structure is 24 S-T and 61 S-T. The trusses, spaced about 4 ft. apart, are 21 ft. long, 26 in. deep and weigh 120 lb., to withstand the impact of cars travelling at 90 m.p.h. The decking is made up of sectional wood platforms, each locking to the adjoining surface and superstructure.

The track is 36 ft. wide on straightaway (banked) with one 13-ft. truss and one 21-ft. truss; 44 ft. wide on curves, with two 21-ft. trusses, a 12-ft. wide apron, and has 60,000 sq. ft. of board area.

It is claimed that this aluminum-structure and wood surfaced track overcomes these disadvantages of the ordinary midget car racing tracks: Irregularities to which dirt, concrete, macadam or other hard surfaces are subject; indoor tracks usually too short on straightaways for cars to attain real racing speed; lack of banking enabling the lead car to get into a position from which it is almost impossible to displace it because of lack of passing room.

The designers of the prefabricated aluminum track are Leon and Lionel Levy, New York City architects.

**ALUMINUM FRAME** supports wood racing deck for tiny racing automobiles



**QUICK ERECTION** is achieved by "buttoning" adjoining sections together

## Bureau of Standards has a corrosion exhibit

In connection with comparative field tests of the corrosion resistance of various pipe materials in different types of soils, the National Bureau of Standards has announced an exhibit of about 3,000 actual test specimens. Those interested in the behavior of materials underground are invited to inspect the test samples, which will be on display until Aug. 15, 1948, in the Bureau's Underground Corrosion Laboratory, Connecticut Avenue and Van Ness Street, N. W., Washington, D. C.

The specimens were exposed at 15 test sites throughout the United States for periods ranging from five to fourteen years. They consist of 85 varieties of materials, including seven types of wrought iron and wrought alloys, 17 types of cast iron and cast alloys, 22 types of steel and steel alloys, 13 types of copper and copper alloys, and miscellaneous samples of lead, zinc, metallic—and nonmetallic-coated pipe, and asbestos-cement pipe. Measurements of loss of weight and depth of pitting of the specimens have been made, and a report on the corrosion resistance shown is in preparation.

## Resume dredging Willamette River

Dredging operations in the Willamette River near Portland, Ore., have been resumed with recession of flood waters in that area. The project, planned to produce an eleven-mile channel, 35-ft. deep, has reached its final phase. The new channel will be 500 ft. wide on the average.

Expense of the dredging totals more than $1,000,000 and will be met by the Port of Portland. Maintenance will be the task of the federal government. About 12,000,000 cu. ft. of material will have been dredged at completion of the work.

## Shirley Highway opening set for next summer

Virginia State Highway Department officials have announced a tentative plan for opening the southbound lane of the Henry G. Shirley Memorial Highway by the summer of 1949. This should relieve considerable traffic congestion on U. S. Route 1 south of the nation's capital.

## Army engineers organize McNary dam division

A new division, known as the McNary Dam division, has been created within the Portland district of the Corps of Engineers.

Lt. Col. William J. Ellison, Jr., will head the division and supervise design, construction and management of the McNary townsite and service areas, all construction operations on McNary Dam and preparation of estimates on all contracts.

## OBITUARY

**Joseph P. Carlin,** 72, president of the P. J. Carlin Construction Company of New York, died July 6 at East Brightwater, L. I. He was a graduate of Brooklyn Polytechnic Institute and held a C.E. degree from Cornell University. Associated since 1897 with the firm founded by his grandfather, he became president in 1910 after seven years as engineer in charge of contracts and six years as secretary. Projects completed under his direction include: major sections of the Independent subway in Brooklyn; the huge Flatlands sewer in Brooklyn; approaches to the Holland and Lincoln Tunnels and the George Washington Bridge; the New York City Penitentiary at River's Island, and two bridges over the Cape Cod Canal. He was trustee and secretary of the Brooklyn Polytechnic Institute and trustee of St. Joseph's College for Women, Brooklyn.

**Harold Austin Nealon,** 66, construction engineer of Toronto, Ont., died July 2.

**Joseph A. Parry,** 74, civil engineer and retired assistant general superintendent of the United Gas Improvement Co., Philadelphia, died recently at Swarthmore, Pa. Graduated from the U. S. Naval Academy in 1893 he did graduate work in civil engineering at the U. of Illinois.

**Charles T. West,** 65, who served as state highway district engineer in four Kentucky counties, died June 30 at his home near Hopkinsville, Ky.

**Wyman Parker Smith,** 43, vice-president and chief engineer of the Heller-Murray Co., Youngstown, Ohio, contractors, died at Hamburg, Pa., recently.

**Irving E. Matthews,** 83, who retired in 1933 as superintendent of the Rochester (N.Y.) Waterworks, died June 28. A graduate of Rensselaer Polytechnic Institute, he was past president of the Rochester section of the American Society of Civil Engineers.

**John R. W. Ambrose,** 70, who, as chief engineer of the Toronto Terminals Railway Co., prepared plans for the Toronto viaduct, died at his home in Toronto. He retired in 1944.

**George M. Harrer,** 78, retired eight years ago as civil engineer for New York State at Tonawanda, died there on June 28.

**Edwin A. Fisher,** 101, who retired officially in 1927 from his post as superintendent of city planning for Rochester, N. Y., then went on to actively pursue studies of flood prevention and control until recently, died at Rochester, N. Y., July 12, five days before his 101st birthday. He was appointed city engineer of Rochester in 1896 after 26 years of civil engineering experience. He planned and built the waterworks system for that city.

**George O. Muhlfeld,** 73, vice-chairman of the board and a director of Stone and Webster Inc., died at Englewood, N. J., July 8. In his 47 years of engineering he supervised construction of hydro-electric power projects, the Hog Island shipyards and arms plants. President of the company from 1942 to 1944, he was a Cornell University graduate and did graduate work at Purdue University.

**Frank G. Wolfe,** 88, civil engineer on the building of the Lackawanna Railroad and later associated with several coal companies, died July 8 at Scranton, Pa. He was a graduate of Cooper Union, N. Y.

**Franklin B. Johnston,** division engineer of the Ohio Highway Department, died in Kent, O., July 6.

## *Engineers and Scientists Needed by Navy*

The Navy Department announces that it is seeking engineers and scientists in practically every field for employment in Washington, D. C. with salaries ranging from $2974 to $10,330.

Applications for the positions should be made on Standard Form 57, available at any first or second-class Post Office, and mailed to Code 612, Room 1213, Main Navy Building, 17th and Constitution Avenue, Washington, D. C.

## MAJOR MEETINGS

**American Road Builders Show,** Soldier Field, Chicago, Ill., July 16-24.

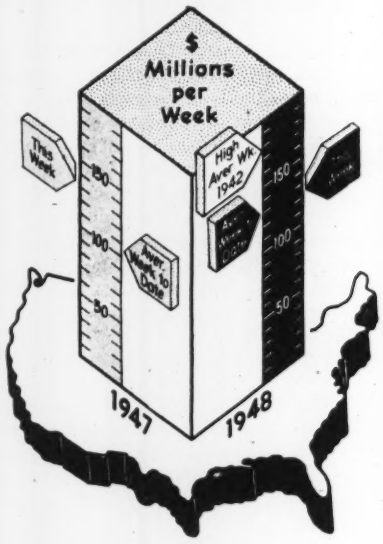
**American Society of Civil Engineers,** Annual convention, Hotel Olympic, Seattle, Wash., July 21-23.

**Oregon Traffic Engineering Conference,** Oregon State College, Corvallis, July 29-31.

**Regional Surveying Teachers Conference,** Green Engineering Camp, Ringwood, N. J., Aug. 26-28.

**National Council of State Boards of Engineering Examiners,** annual meeting, Hotel Utah, Salt Lake City, Utah, Aug. 26-28.

## CONSTRUCTION ACTIVITY




As Reported this week to . . .
*Engineering News-Record*

### CONTRACT VOLUME

**Continental U. S. Only (Thousands of Dollars)**

| | Week of July 15 1948 | Cumulative 1948 (29 wks.) | Cumulative 1947 (29 wks.) |
|---|---|---|---|
| Federal .... | $15,246 | $578,224 | $389,779 |
| State & Mun. | 50,544 | 1,351,520 | 918,653 |
| Total Public. | $65,790 | $1,929,744 | $1,308,432 |
| Total Private | 60,799 | 1,859,855 | 1,654,072 |
| **U. S. Total..** | **$126,589** | **$3,789,599** | **$2,962,504** |

### WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

**Dollar Volume (Thousands)**

| Type of Work | This Week | Cumulative 1948 (20 wks.) | Cumulative 1947 (29 wks.) |
|---|---|---|---|
| Waterworks ... | $1,756 | $103,806 | $62,699 |
| Sewerage ..... | 5,958 | 119,540 | 72,614 |
| Bridges ..... | 6,880 | 164,362 | 88,634 |
| Highways ..... | 20,834 | 556,619 | 437,422 |
| Earthwork, Waterways .... | 8,467 | 294,768 | 186,131 |
| Buildings, Public | 15,712 | 574,071 | 303,358 |
| Industrial ... | 11,366 | 560,644 | 424,955 |
| Commercial . | 44,595 | 1,067,880 | 971,177 |
| Unclassified ... | 11,021 | 349,929 | 415,514 |

NOTE: Minimum size projects included are: Waterworks and waterway projects, $28,000; other public works, $50,000; industrial buildings, $68,000; other buildings, $250,000.

### NEW PRODUCTIVE CAPITAL

| | Cumulative 1948 29 wks.) | Cumulative 1947 (29 wks.) |
|---|---|---|
| NON-FEDERAL .... | $2,939,867 | $1,084,058 |
| Corporate Securities | 1,481,464 | 438,119 |
| State and Municipal | 1,031,114 | 645,939 |
| Fed. Aid Highway. | ..... | 427,289 |
| Federal ..... | ..... | 1,558,932 |
| **Total Capital ..... .** | **$1,031,114** | **$1,084,058** |

### ENR INDEX NUMBERS

| Index Base = 100 | | 1913 | 1926 |
|---|---|---|---|
| Construction Cost.. | July '48 | 463.23 | 222.67 |
| Building Cost ..... | July '48 | 342.42 | 185.10 |
| Volume ..... | June '48 | 282. | 124 |